

# China / Hong Kong Company Guide

# JL Mag Rare-Earth

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Refer to important disclosures at the end of this report

DBS Group Research . Equity

28 Apr 2022

**H: BUY** (Initiating Coverage)

Last Traded Price (H) ( 28 Apr 2022):HK\$20.40(HSI : 20,276)  
Price Target 12-mth (H):HK\$26.00 (27.5% upside)

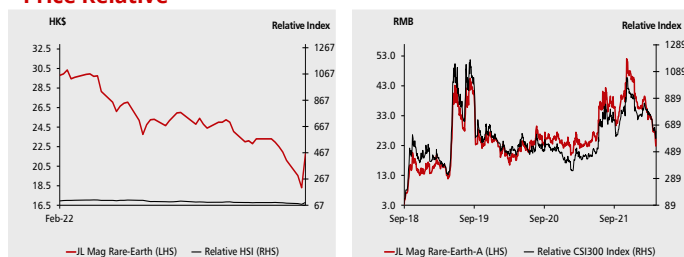
**A: BUY** (Initiating Coverage)

Last Traded Price (A) ( 28 Apr 2022):RMB24.80(CSI300 Index : 3,921)  
Price Target 12-mth (A):RMB31.00 (25.0% upside)

### Analyst

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### Price Relative



### Forecasts and Valuation

FY Dec (RMBm)	2020A	2021A	2022F	2023F
Turnover	2,417	4,080	6,906	8,478
EBITDA	394	643	920	1,143
Pre-tax Profit	279	512	764	961
Net Profit	245	453	672	854
Net Pft (Pre Ex)(core)	245	453	672	854
Net Profit Gth (Pre-ex)	55.8	85.4	48.2	27.2
EPS (RMB)	0.59	0.64	0.80	1.02
EPS (HK\$)	0.70	0.76	0.96	1.22
EPS Gth (%)	54.9	8.5	26.0	27.2
Diluted EPS (HK\$)	0.70	0.76	0.96	1.22
BV Per Share (HK\$)	4.51	4.99	9.52	10.31
PE (X)	29.0	26.8	21.2	16.7
P/Cash Flow (X)	44.9	119.1	nm	49.7
EV/EBITDA (X)	18.6	19.0	12.9	10.7
Net Div Yield (%)	0.0	0.0	0.0	0.0
P/Book Value (X)	4.5	4.1	2.1	2.0
Net Debt/Equity (X)	0.2	0.0	(0.4)	(0.3)
ROAE(%)	16.9	20.0	14.0	12.3
Earnings Rev (%):			New	New
Consensus EPS (RMB)			0.89	1.16
Other Broker Recs:		B:1	S:0	H:0

Source of all data on this page: Company, DBS Bank (Hong Kong) Limited ("DBS HK"), Thomson Reuters

### Riding on carbon neutral mission

- Top player with 21.3% market share in global high-performance REPMs market
- Products used in various energy-saving sectors catering to the carbon neutral mission
- Robust capacity expansion plans to drive growth
- Initiate with BUY and TP of RMB31/HKD26 for A/H shares

Attractive entry levels to buy the leader in high-performance REPMs. JL MAG is a leading producer of high-performance rare earth permanent magnets (REPMs) leveraging on grain boundary diffusion (GBD) technology. After recent share price weakness, its A/H shares are attractively trading at 24x/17x FY23 PE.

**Products catering to carbon neutral mission globally.** JL MAG's products are widely used in energy-saving sectors to improve performance. The global demand is expected to increase to 130,000 tonnes in 2025, representing a CAGR of 14.4% from 2020 to 2025.

**Continuous capacity expansion to enable sustainable growth.** JL MAG plans to increase the overall annual capacity to 40 thousand tons by 2025 (+167% from now) to take new orders.

**Where we differ:** The market underestimates the market volume growth potential, under the carbon neutral mission, REPMs are critical and widely required. We expect JL MAG could grab the opportunity to expand and grow to be a world-class NdFeB PMs provider.

### Valuation:

We initiate coverage with BUY and TP (Target Price) of RMB31 and HKD26 for A shares and H shares respectively based on 30x/21x FY23 EPS (We assigned a 30% valuation discount of H- vs. A-shares in line with JL MAG's historic trading range).

### Key Risks to Our View:

Major risks include raw material price fluctuations, loss of major customers, and adverse regulatory changes in downstream industries.

### At A Glance

Issued Capital – A+H shares (m shs)	836
Total Mkt Cap (HK\$m/US\$m)	24,387 / 3,108
Major Shareholders (%)	
Jiangxi Ruide Venture Capital Co., Ltd.	28.9
GoldWind Investment Holdings Company Ltd.	7.0
Ganzhou Rare Earth Group Co., Ltd.	5.2
H Shares-Free Float (%)	58.9
3m Avg. Daily Val. (US\$m)	2.61
GICS Industry: Materials	



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## JL Mag Rare-Earth

### Investment Summary

#### Leading global producer of high-performance REPMs.

Founded in 2008 and headquartered in Ganzhou, JL MAG dominates the REPM market leveraging on its GBD technology. JL MAG is ranked first in the world in terms of production of high-performance REPMs with a market share of c.14.5% by volume and ranked first in the world's GBD REPMs market with a market share of c.21.3% by volume in 2020.

#### Products used in various energy-saving industries.

JL MAG's products primarily consist of finished high-performance NdFeB PMs. During 2010, 2011 and 2012, JL MAG commenced production of high performance NdFeB PMs for customers in the wind turbine, energy saving VFAC and NEV sectors, respectively. In recent years, it gained a presence in new areas such as 3C and rail transportation. The company will seek opportunities in high-end markets such as robotics and intelligent manufacturing, energy-saving elevators, and high efficiency industrial motors.

#### Huge sales potential backed by capacity expansion.

JL MAG has been increasing production capacity of high-performance NdFeB PM blanks at its Ganzhou production base, from 7,000 tonnes per annum in 2018 to 15,000 tonnes in 2021, representing CAGR of 28.9% from 2018 to 2021. Moreover, the company plans to build new facilities in Ganzhou, Baotou and Ningbo, increasing the overall annual capacity of high-performance NdFeB REPM blanks to 40,000 tons by 2025 to take in new orders, especially from the NEV and 3C sectors.

**China dominates the global production and consumption of high-performance NdFeB PMs.** In 2020, China produced 46,200 tonnes of high-performance NdFeB PMs, taking up 69.7% of the global production, and is expected to produce 105,100 tonnes of high-performance NdFeB PMs in 2025, expanding at a CAGR of c.17.9% from 2020 to 2025.

**Green energy sectors to drive demand for high-performance REPMs.** China has set out plans for reaching carbon emission peak by 2030 and realizing carbon neutral by 2060. Increasing energy-saving awareness and regulatory requirements are expected to stimulate new demand from sectors such as NEVs, wind turbine generators and high-efficiency energy-saving industrial motors, and thus increase the consumption of REPMs, especially high-performance NdFeB PMs.

#### Significant price hike since 2020 due to economic recovery and NEV demand.

Following the demand surge from the NEV industry and economic recovery post COVID-19, the demand for high-performance NdFeB PMs had soared in from first half of 2021, which led to substantially higher prices of rare earth materials.

**We expect JL MAG's revenue to grow by 69% and 23% in FY22 and FY23, respectively, translating into c.44% 2-year CAGR, and we expect its attributable profits to grow by 48% and 27%, or at a 2-year CAGR of 37%.** We expect a significant growth in sales volume underpinned by NdFeB PMs blanks production capacity expansion from

15,000t/year in FY21 to 40,000t/year in FY25, representing a 4-year CAGR of c.28%. We also expect its ASP to stay high during FY22-23 considering the improved sales structure to higher ASP sectors such as 3C, energy-saving VFACs and NEVs, and the higher price of rare earth materials based on the imbalance between relatively tight control of rare earth supply and fast-growing demand of REPMs. JL MAG has been able to record stable margins by adopting a cost-plus pricing mechanism. We expect gross profit margin to fluctuate in the near run due to pricing mismatch, while be stable in the long run leveraging on better product mix and more usage of GBD technology.

**We initiate coverage with BUY rating and TP (Target Price) of RMB 31 and HKD 26 for A shares and H shares respectively based on FY23 EPS.** Our assigned target PE multiple of 30x for A shares and 21x for H shares consider

REPMs high industry growth CAGR, JL MAG's competitive advantages, and different valuation environments between AH markets.

We believe JL MAG's strong execution, vast management experience and robust internal controls will build a solid foundation to further its market share and step into new business sectors.

Major risks include raw material price fluctuations, loss of major customers, and adverse regulatory changes in downstream industries.

## JL Mag Rare-Earth

### Valuation & Peers Comparison

**Entering development fast lane.** Based on our financial forecast of JL MAG for FY22-23, the company has entered a fast-growth phase led by commencement of its new production lines in Ganzhou, Baotou and Ningbo. We expect 2-year revenue CAGR and attributable net profit CAGR in FY21-23F to be 44% and 37%, respectively.

**We initiate coverage with BUY rating and TP (Target Price) of RMB 31 and HKD 26 for A shares and H shares respectively based on 30x/21x FY23 EPS.** Our assigned target PE multiple for A shares and H shares considers REPMs high industry growth CAGR, JL MAG's competitive advantages, and different valuation environments between AH markets.

**1) A share – assigned TP RMB31:** The assigned multiple of 30x factors in its high growth CAGR (substantial new production capacity plans), better profitability (high among industry), and leading market position (ranked first in the world's GBD REPMs market).

**2) H share – assigned TP HKD26:** Considering that JL MAG's AH shares represent rights of same assets of JL MAG, we value JL MAG's H shares based on the identical EPS estimates as A shares. Besides, due to the differed market preference and liquidity issues between A/H markets, a 30% valuation discount should be applied in line with the H/A discount range of JL MAG's historical level and of Ganfeng Lithium's average level (similarly AH dual-listed and related to carbon neutral sector). In all, we assign 21x PE to value JL MAG's H shares.

**Comparable valuation:** The closest comparable for JL MAG is Yantai Zhenghai Magnetic Material (300224 CH, not rated) with a similar business scale and strong potential in the NEV sector. Beijing Zhong Ke San Huan (000970 CH, not rated) and Ningbo Yunsheng (600366 CH, not rated) have different industry mix or relatively lower profitability compared to JL MAG. Chengdu Galaxy Magnets is not comparable because it produces bonded NdFeB magnets products, whose usage is relatively limited and small compared to sintered NdFeB magnets that JL MAG produces.

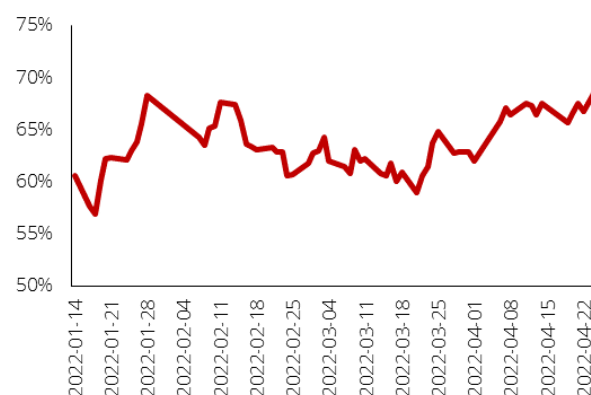
We believe JL MAG's strong execution, vast management experience and robust internal controls will enable the company to build a solid foundation to further its market share and step into new business sectors.

### JL MAG valuation

	2021	2022E	2023E
Net profit (RMB mn)	453.2	672.1	854.4
yoy growth (%)	85.4%	48%	27%
EPS	2021	2022E	2023E
A shares	0.6	0.8	1.0
H shares (1HKD=0.83 RMB)	0.8	1.0	1.2
PE multiple			
A shares			30
H shares			21
Target Price			
A shares (RMB/share)			31
H shares (HKD/share)			26

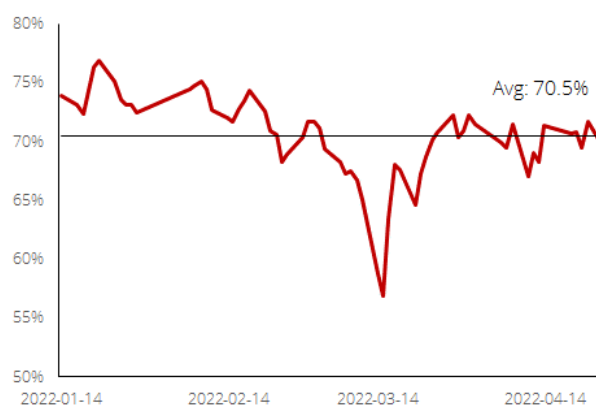
Source: DBS HK

### JL MAG AH share price comparison (H/A)



Source: Wind, DBS HK

### Ganfeng Lithium AH share price comparison (H/A)



Source: Wind, DBS HK

## JL Mag Rare-Earth

### Peers comparison

Company Name	Code	Currency	27-Apr Price Rmb	Mkt Cap Rmb bn	PE 21A x	PE 22F x	PE 23F x	Sales 21A Rmb bn	Sales 22F Rmb bn	Sales 23F Rmb bn	N. Profit 21A Rmb bn	N. Profit 22F Rmb bn	N. Profit 23F Rmb bn	N. Profit 22F %	Latest reported	
															Gth 22F	Net margin %
<b>Compables in REPMs industry:</b>																
Yantai Zhenghai Magnetic Mra.'A'	300224	CH	CNY	11.18	9.2	34.6	18.0	12.3	3.4	5.7	7.9	0.3	0.5	0.7	45.4	7.9
Beijing Zhong Ke San Huan Hith.'A'	000970	CH	CNY	10.39	12.6	30.3	18.6	13.7	7.1	10.9	13.4	0.4	0.7	0.9	41.3	5.6
Ningbo Yunsheng 'A'	600366	CH	CNY	8.51	8.4	16.0	12.9	9.0	3.8	7.0	8.3	0.5	0.7	0.9	44.9	13.8
<b>Average</b>							<b>16.5</b>	<b>11.6</b>								

Source: # FY21: FY22; FY22: FY23

Source: Thomson Reuters, \*DBS HK, based on price close on 27<sup>th</sup> April, 2022

## JL Mag Rare-Earth

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### Key Risks

#### Raw material price fluctuations

Rare earth production in China is strictly regulated by the government. The government issues two batches of rare earth mining quotas and smelting and separation quotas each year to control the total production of rare earths in China. As rare earth production is mainly in China and quotas may not be sufficient to meet the growing global demand, there could be a shortage of supply, which drives up prices, thus affecting the company's margins in the short term.

#### Loss of major customers

The five major customers accounted for around 57% of total revenue in 2021. There's no guarantee that these

customers will place orders with the company permanently. If major customers reduce or cease to place orders for any reason, and the company is unable to replace these with orders of comparable size, the company's business could be materially and adversely affected.

#### Adverse regulatory changes in downstream industries

The company's major business segments and downstream sectors are all government-driven and supported industries. There is no assurance that the policy environment will continue to be as favourable in the future. New regulations or changes, less favourable regulatory requirements, or any rollback of subsidies, could have an adverse impact on the downstream demand, thus reducing demand for the company's products.

## JL Mag Rare-Earth

### SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Leading producer of high-performance REPMs</li> <li>• High customer stickiness and high entry barriers</li> <li>• Strong R&amp;D capabilities and leading industry role applying its GBD technology</li> </ul>	<ul style="list-style-type: none"> <li>• Company's performance depends on major 5 customers, which accounted for 67.6% of FY20 revenue</li> <li>• No mines on hand to secure rare earth materials supply</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Rising demand from overseas markets</li> <li>• Growing downstream demand from top players under the carbon neutral mission</li> </ul>	<ul style="list-style-type: none"> <li>• Main raw materials rely on importation from a limited number of suppliers</li> <li>• Government has strict controls over rare earth supply</li> <li>• Lack of financial instruments to hedge raw material prices fluctuations</li> </ul>

Source: DBS HK

**JL Mag Rare-Earth**

**Critical Factors**

**CF1: Neodymium (Nd) price vs. JL MAG share price:**

Higher upstream raw material price will drive up JL MAG's product ASP under the cost-plus pricing mechanism with customers, benefiting JL MAG's earnings scale and profitability. For JL MAG, rare earth materials (mainly represented by Nd metal) took up c.80% of procurement cost, which is a leading indicator of its ASP. Its strong bargaining power over customers could ensure rapid pricing re-negotiation after raw material price fluctuates. We expect the tight balance between rare earth supply and demand would continue in 1-2 years considering the prominent development of energy-saving industries and supply shortage of rare earth, thus we expect that Nd price would fluctuate around historical high, providing solid high ASP base for JL MAG.

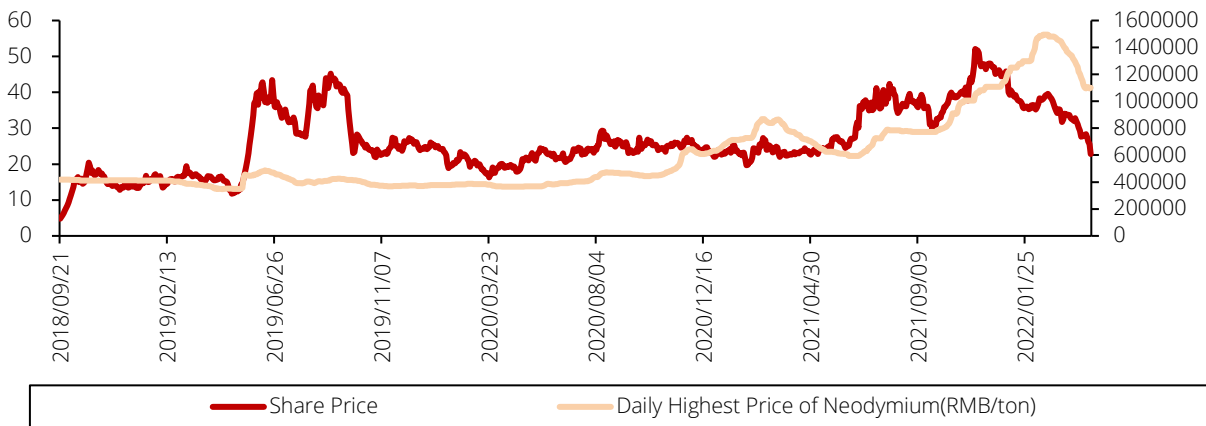
**CF2: Gross margin vs. JL MAG share price:**

Gross margin, as a major indicator of profitability, could influence investors' expectations for JL MAG's short-term performance. There could be price lag before raw material prices change reflecting on ASP, which affects quarterly GPM. Substantial increase in raw material prices throughout 2021 harmed JL MAG's GPM especially in 2H21. For FY22, we expect the margin to recover swiftly after new rounds of price negotiations at 1Q22.

**CF3: Sales volume vs. JL MAG share price:**

JL MAG's long-term business relationships with major customers and swift expansion into emerging fields such as NEVs and high efficiency industrial motors provided huge market for JL MAG's newly increased capacity. JL MAG has planned to expand its production capacity to 40000 tons by 2025 eyeing on the soaring demand from energy saving sectors especially NEV, indicating a potential substantial increase in sales volume.

**Neodymium (Nd) price vs. JL MAG share price**

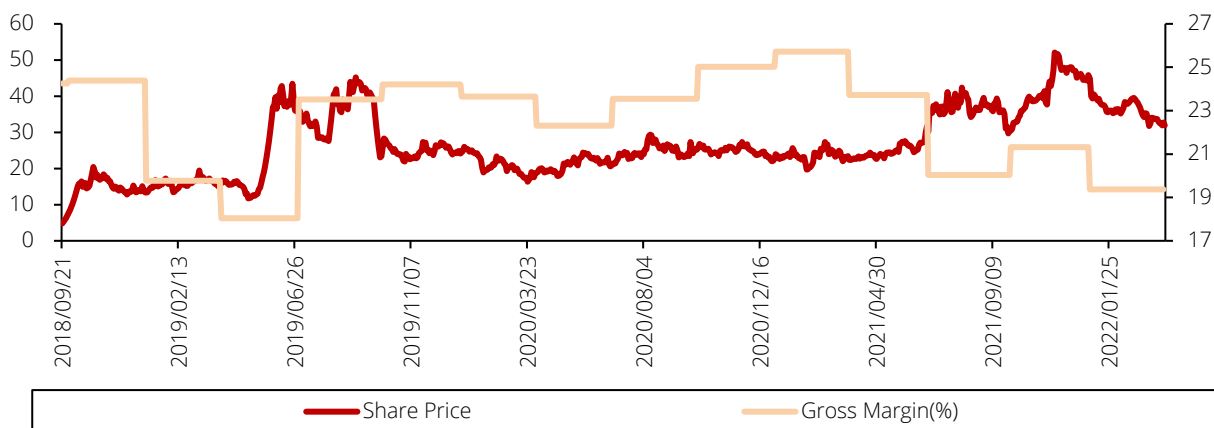


Source: Company, Wind, DBS HK



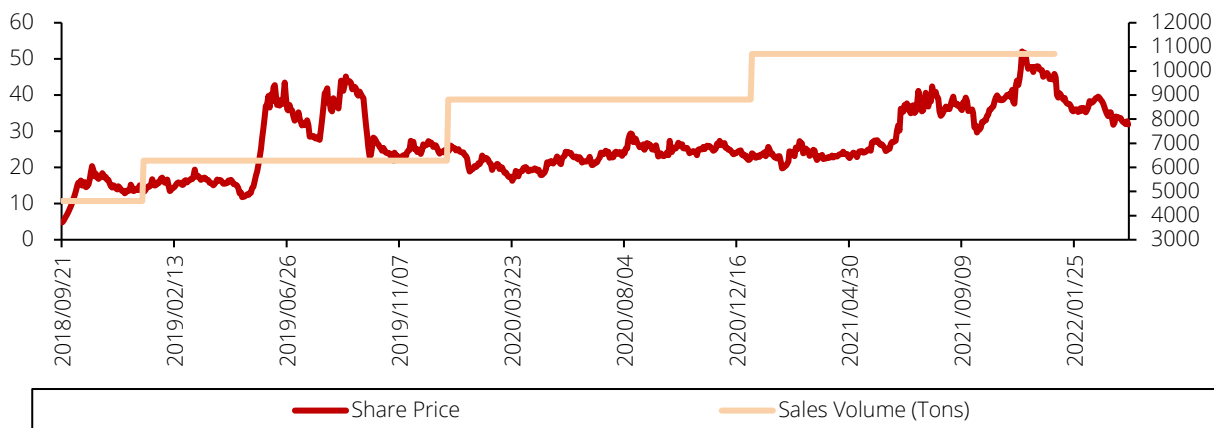
## JL Mag Rare-Earth

### Gross margin vs. JL MAG share price



Source: Company, Wind, DBS HK

### Sales volume vs. JL MAG share price



Source: Company, Wind, DBS HK

## JL Mag Rare-Earth

### Financials

JL MAG focuses on sales of high-performance NdFeB PM finished products to customers for use in various downstream applications. Sales volume growth of JL MAG is in line with the growth of the production capacity of NdFeB PM blanks. The robust outlook of NEV, wind power and energy-saving VFAC sectors backed by China's plans to reach carbon emissions peak by 2030 and carbon neutrality by 2060 would fuel the demand for REPMs. We expect that JL MAG's strategies to construct new production lines and improve existing production processes would help to increase its business scale and global market share.

**Revenue expected to grow at c.44% 2-year CAGR during FY21-23F.** The significant increase in revenue in FY20 was mainly due to sales increase from the domestic energy-saving VFAC sector following the new AC Standard implemented by National Standardization Administration Committee in July 2020, which led to energy-saving VFAC manufacturers to use NdFeB PMs in their products. Sales grew even faster in FY21 mainly due to the surged volume increase of NEVs globally.

We expect to see a significant growth of sales volume given that JL MAG is in the process of expanding its production capacity by upgrading its existing production facilities in Ganzhou in Jiangxi province and constructing additional production bases in Baotou in Inner Mongolia province and Ningbo in Zhejiang province. The new production lines would commence commercial production during FY22-24, ready to secure new orders, especially in the NEV and 3C sectors. We expect the capacity of NdFeB PMs blanks to increase from 15,000t/year in FY21 to 40,000t/year in FY25, representing a 4-year growth CAGR of c.28%.

We expect ASP to stay high during FY22-23 benefitting from (i) improving sales mix from a shift to higher ASP sectors such as 3C, energy-saving VFACs and NEVs; and (ii) higher price of rare earth materials such as Nd given the imbalance between the relatively tight control over rare earth supply and fast-growing demand of REPMs.

Overall, we expect JL MAG's revenue to grow by 69% and 23% in FY22 and FY23, respectively, translating into c.44% 2-year CAGR, and we expect its attributable profits to grow by 48% and 27%, or at a 2-year CAGR of 37%.

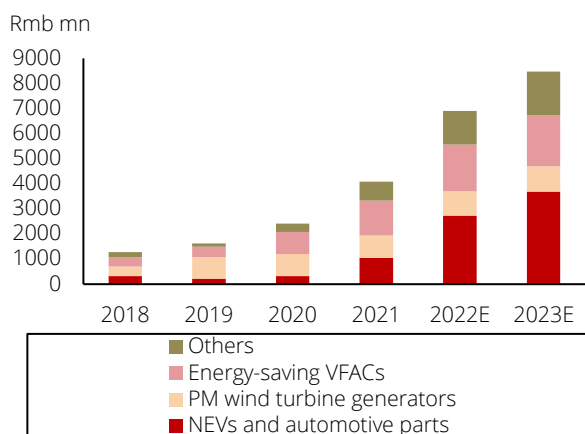
### Revenue Breakdown of JL MAG during FY18-23F

	2018	2019	2020	2021	2022E	2023E
<b>Revenue (mn)</b>	<b>1,282</b>	<b>1,630</b>	<b>2,417</b>	<b>4,080</b>	<b>6,906</b>	<b>8,478</b>
NEVs and automotive parts	318	220	326	1,051	2,732	3,688
PM wind turbine generators	386	855	879	887	976	1,005
Energy-saving VFACs	371	422	878	1,400	1,862	2,048
Others	206	133	334	742	1,336	1,737
<b>Revenue yoy growth rate(%)</b>		<b>27%</b>	<b>48%</b>	<b>69%</b>	<b>69%</b>	<b>23%</b>
NEVs and automotive parts		-31%	48%	223%	160%	35%
PM wind turbine generators		121%	3%	1%	10%	3%
Energy-saving VFACs		14%	108%	59%	33%	10%
Others		-36%	152%	122%	80%	30%
<b>Profit attributable to equity holders (mn)</b>	<b>147</b>	<b>157</b>	<b>245</b>	<b>453</b>	<b>672</b>	<b>854</b>
yoy growth rate (%)		7%	56%	85%	48%	27%
<b>Sales volume (t)</b>						
High-performance NdFeB PM finished products	4,097	6,133	8,545	10,709	14,992	19,490
<b>Production volume (t)</b>						
High-performance NdFeB PM finished products	4,801	6,632	9,613	10,325		
<b>Production capacity (t)</b>						
NdFeB PM blanks	7,000	8,800	12,800	15,000	23,000	30,000
Theoretical High-performance NdFeB PM finished products	4,900	6,160	8,960	10,500	16,100	21,000
<b>ASP (RMB/t)</b>						
High-performance NdFeB PM finished products	291,200	261,705	262,549	381,011	460,624	435,005
<b>ASP yoy growth rate (%)</b>		-10.1%	0.3%	45.1%	20.9%	-5.6%

Source: Company, DBS HK

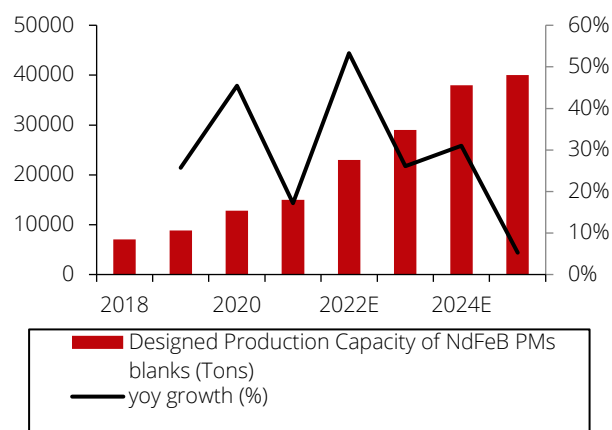
## JL Mag Rare-Earth

### Revenue breakdown of JL MAG by sector (Rmb m)



Source: Company, DBS HK

### Capacity expansion of JL MAG (tonnes)



Source: Company, DBS HK

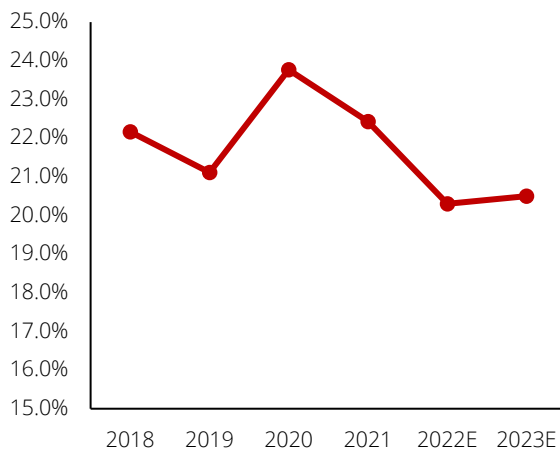
### Cost of sales breakdown

	Year ended December 31,						Three Months ended March 31,			
	2018		2019		2020		2020		2021	
	(RMB'000)	(%)	(RMB'000)	(%)	(RMB'000)	(%)	(RMB'000)	(%)	(RMB'000)	(%)
Raw materials and consumables	769,338	77.1	1,001,532	77.9	1,413,872	81.0	231,541	77.4	464,669	81.6
- Rare earth	706,227	70.8	934,090	72.6	1,320,996	75.7	217,247	72.6	438,358	77.0
- Other raw materials and consumables	63,111	6.3	67,442	5.3	92,876	5.3	14,294	4.8	26,311	4.6
Employee benefit expenses	92,451	9.3	114,844	8.9	129,700	7.4	24,260	8.1	40,702	7.2
Other manufacturing overheads	73,570	7.4	90,424	7.0	105,081	6.0	24,520	8.2	35,341	6.2
Other expenses	62,534	6.2	79,156	6.2	97,026	5.6	18,902	6.3	28,495	5.0

Source: Company, DBS HK

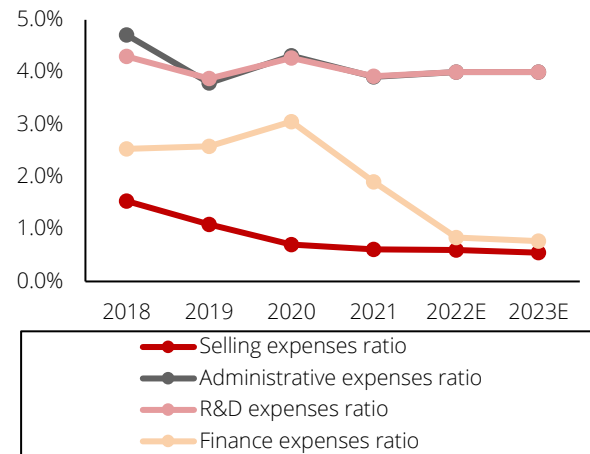
## JL Mag Rare-Earth

### Gross margin of JL MAG during FY18-23E



Source: Company, DBS HK

### Expense-to-revenue ratio during FY18-23E



Source: Company, DBS HK

**Margins to fluctuate in the near term due to pricing mismatch, while expected to be stable in the long run leveraging on better product mix and more usage of GBD technology.** Although rare earth materials account for over 75% of cost of sales, JL MAG has been able to record relatively stable margins by adopting a cost-plus pricing mechanism for high performance NdFeB PMs. JL MAG's GPM slide slightly in FY21 because the price negotiation period is longer for NEVs customers, which put pressure on JL MAG's margin given the sharp raw materials price hike in 2H21. We expect the margin will decrease in FY22 and recover in FY23 due to changed customer mix. The company is applying the GBD technology to more finished products, which could reduce the amount of medium and heavy rare earth used in production without undermining the performance of NdFeB PMs, thus raising margins. As production capacity gradually expands, benefits of economies of scale would also raise margins.

**Operational efficiency to improve.** We expect selling expenses to revenue ratio to remain stable considering its stable and long-term relationship with customers. JL MAG's capex will increase for new capacity in Baotou, Ningbo and Ganzhou. We expect an increasing administrative expenses ratio after the new production lines commerce operation during FY22-24 due to more depreciation. We expect finance expenses to decline significantly after the company leveraged on H share equity financing to repay debts.

## JL Mag Rare-Earth

### Environment, Social & Governance (ESG)

#### Environment

The company's products are mainly used in sustainable manufacturing sectors such as NEVs, energy-saving VFACs and wind power generators. The company focuses on saving resources during the production process by engaging third-party companies to extract rare earth from waste materials for reuse. The company also continuously enhances the production process and technologies used to reduce the amount of heavy rare earth used and the consumption of electricity and water.

#### Social

The company' employees have established a labour union to protect their rights, encourage them to participate in the decision-making process and assist to maintain harmonious relationship between the company and employees. As of June 30, 2021, the company had 3,297 employees. During the COVID-19 pandemic in 2020, the company donated approximately RMB1.1 million worth of medical supplies and funds to the society.

#### Governance

The company's senior management has vast management and industry-related experience to manage the company independently without external interference. The company has a robust operational structure that allows for continuous, independent access to suppliers and customers. Besides, the company has implemented a share incentive plan pegged to net profit targets to motivate employees. The company recognized share incentive plan expenses of RMB 37.5m and RMB 22.7m during FY20 and 1Q21, respectively.

#### Employee structure

Function	Number of Employees	% Of Total
Production and quality control	2,854	85.5
Research and Development	238	7.1
Management and administration	175	5.2
Sales, business development and marketing	59	1.8
Finance	14	0.4
<b>Total</b>	<b>3,340</b>	<b>100</b>

Source: Company, DBS HK

### Unlocking conditions of restricted shares

The unlocking period/vesting period	Assessment year	Target net profit (RMB million)	Minimum net profit to trigger (RMB million)	Target rate	Trigger rate
The first unlocking period/vesting period	2020	203.58	187.92	30%	20%
The second unlocking period/vesting period	2021	250.56	219.24	60%	40%
The third unlocking period/vesting period	2022	297.53	266.21	90%	70%

Source: Company, DBS HK

## JL Mag Rare-Earth

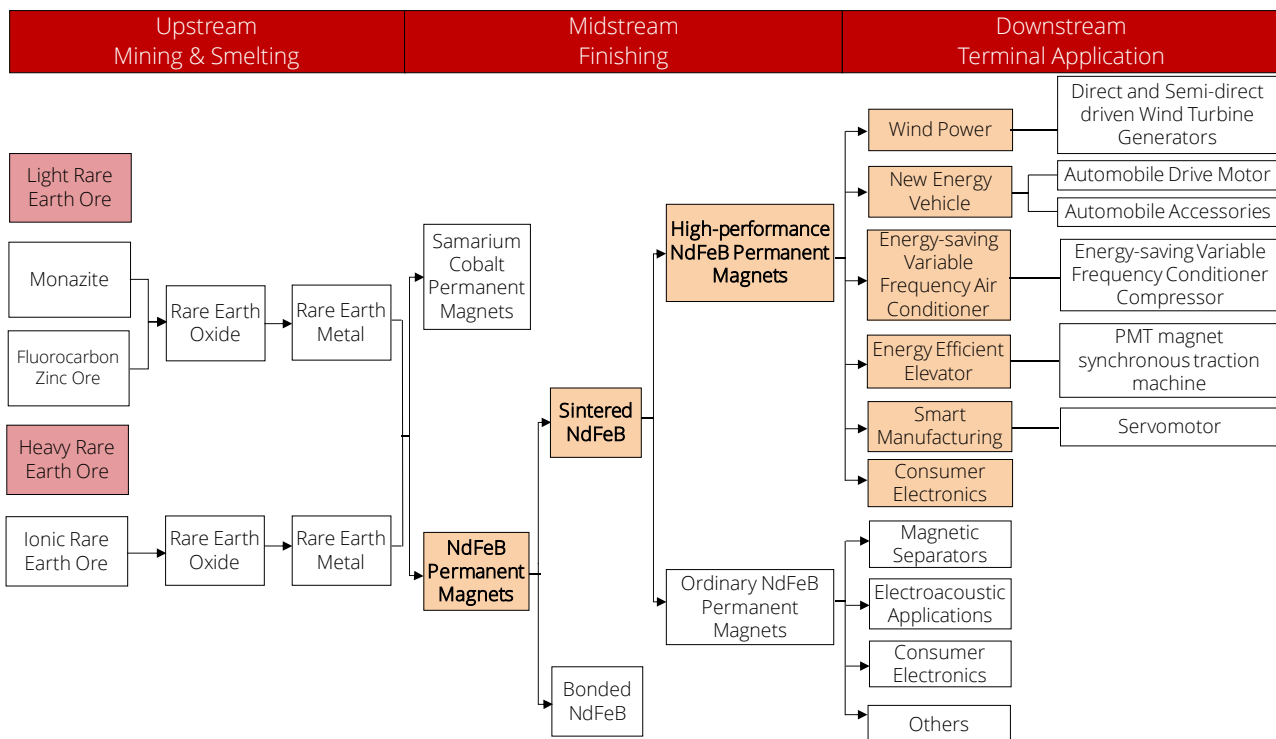
### Industry insights

REPMs are a type of permanent magnets made of magnetized material (using rare earth elements such as alloy of lanthanum) which produces its own permanent magnetic field. Alloy of neodymium, iron and boron (NdFeB) is the most widely used permanent magnet material, mainly due to its high efficiency, low energy consumption, stability, small size, and light weight qualities. According to Frost & Sullivan, over 50% of the global electricity is consumed by electric motors, and REPM

electric motors could save up to 15% to 20% of energy compared with traditional electric motors.

NdFeB permanent magnetic materials can be divided into sintered NdFeB and bonded NdFeB. Sintered NdFeB can be further divided into high-performance NdFeB and ordinary NdFeB. The company's main product - high-performance NdFeB - is mainly used in wind turbine generators, NEVs, VFACs and other energy-saving products, while other ordinary NdFeB PMs are used in magnetic separators, electroacoustic applications, etc.

### Value chain of REPMs industry



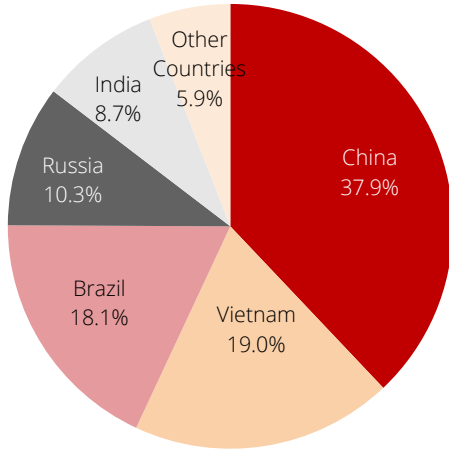
Source: Company, DBS HK

**China has the largest rare earth reserves and production.** China has the world's largest rare earth reserves (c.44 million tonnes), representing c.37.9% of the global reserves (c.116 million tonnes). In terms of production, China accounts for c.57.5% of global production of rare earth. The rare earth market in China is dominated by six rare earth mining groups. Light and heavy rare earths are found in different areas. Light rare earths are mainly located in Inner Mongolia and Sichuan province and heavy rare earths mainly in Jiangxi, Fujian, Hunan and Guangdong.

**c.90% of global REPMs produced in China.** The global production of REPMs increased from 149,900 tonnes in 2015 to 217,400 tonnes in 2020 at a CAGR of c.7.7%. The production volume is expected to increase to 310,200 tonnes in 2025 at a CAGR of c.7.4% from 2020 to 2025. In 2020, China produced 196,200 tonnes of REPMs and accounted for c.90.2% of total 217,400 tonnes of global production. China is expected to produce 284,200 tonnes of REPMs by 2025.

**JL Mag Rare-Earth**

**Shares of rare earth reserve (Global) in 2020**

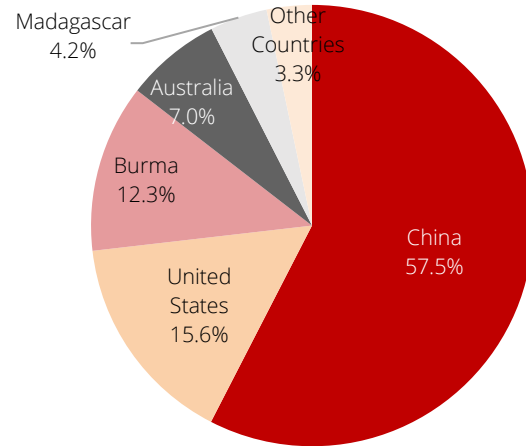


Source: State Council; U.S. Geological Survey

**Positive prospect of the total rare earth quota in China.**

The total rare earth mining quota in China has risen sharply from FY2021. During the period from 2010 to 2020, the annual mining quota grew slowly from 89200 to 140000 tonnes, representing a CAGR of 4.6%, while the growth rate soared to 20% in 2021. The high growth continues in 2022 as well, with a 20% yoy increase in the allowance for the first batch of the mining quota. This substantial increase is mainly due to the flourishing of downstream industries, especially new energy vehicles, wind turbines and energy-saving variable frequency air conditioners, etc. **We expect the tight balance between the supply and demand of upstream rare earth materials will ease in FY22 while remain in the long run as the scarcity and strategic position of rare earth materials determines that the increase of mining quota could not fully keep up with the rapidly growing demand.**

**Shares of production of rare earth (Global) in 2020**



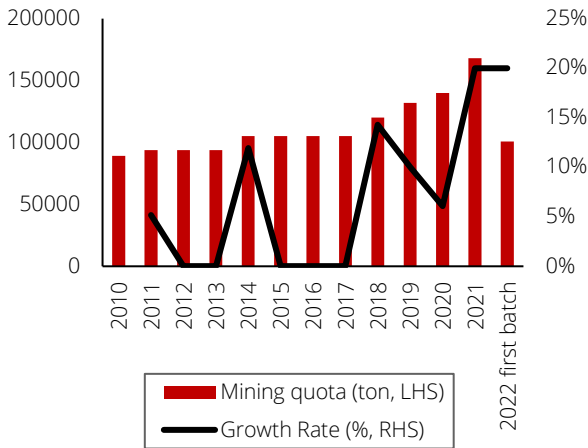
Source: State Council; U.S. Geological Survey

**The stable allocation of the rare earth mining quota among core rare earth companies secures the long-term supply of raw materials for JL MAG.**

China Rare Earth Group (CREG), mainly co-funded by Aluminum Corporation of China, China Minmetals Corporation, and Ganzhou Rare Earth Group (GREG) in 2021, took up 33% and 68% of the light rare earth and heavy rare earth quota respectively in the first batch in 2022. Since GREG is also the shareholder of JL MAG (6.08% in FY21), this close relationship should help securing the supply of raw materials in the long term.

**JL Mag Rare-Earth**

**China annual rare earth mining quota (Tonnes)**

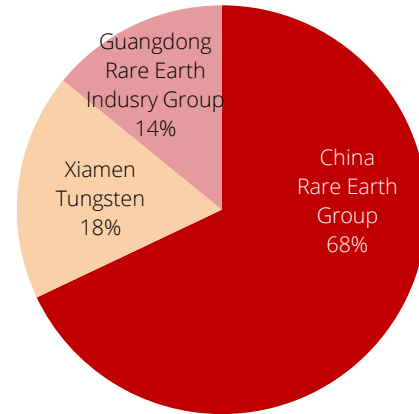


Source: Ministry of Industry and Information Technology of the People's Republic of China, Ministry of Natural Resources of the People's Republic of China, DBS HK

**China's consumption of REPMs outpaced global market.**

Globally, the consumption of REPMs increased from 146,600 tonnes in 2015 to 209,500 tonnes in 2020 at a CAGR of c.7.4%. The consumption volume is expected to increase to 305,200 tonnes in 2025, at a CAGR of 7.8% from 2020 to 2025. China consumed 148,700 tonnes of REPMs, taking up c.71.0% of the total consumption volume in 2020, and is expected to consume 224,700 tonnes of REPMs in 2025 representing a CAGR of 8.6% from 2020 to 2025.

**Allocation of the heavy rare earth quota in the first batch in 2022**



Source: Ministry of Industry and Information Technology of the People's Republic of China, Ministry of Natural Resources of the People's Republic of China, DBS HK

**China dominates global high-performance NdFeB PMs (both production and consumption).**

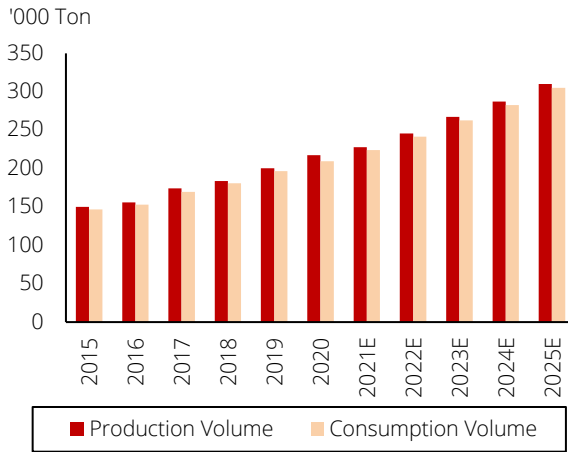
Globally, the production volume of high-performance NdFeB PMs increased from 35,300 tonnes in 2015 to 66,300 tonnes in 2020 at a CAGR of c.13.4%. The production volume is expected to increase to 130,000 tonnes in 2025, representing a CAGR of 14.4% from 2020 to 2025. In 2020, China produced 46,200 tonnes high-performance NdFeB PMs, taking up about 69.7% of the global production, and is expected to produce 105,100 tonnes high-performance NdFeB PMs in 2025, at a CAGR of 17.9% from 2020 to 2025. As China dominates the production of high-performance NdFeB PMs, Chinese companies will have a greater overseas presence.

Globally, the consumption volume of high-performance NdFeB PMs increased from 34,200 tonnes in 2015 to 65,000 tonnes in 2020 at a CAGR of c.13.7%. The consumption volume is expected to increase to 129,100 tonnes in 2025 at a CAGR of 14.7% from 2020 to 2025. In 2020, China consumed 40,500 tonnes of high-performance NdFeB PMs, taking up c.62.3% of the global consumption, and is expected to consume 87,100 tonnes of high-performance NdFeB PMs in 2025, at a CAGR of c.16.6% from 2020 to 2025.



**JL Mag Rare-Earth**

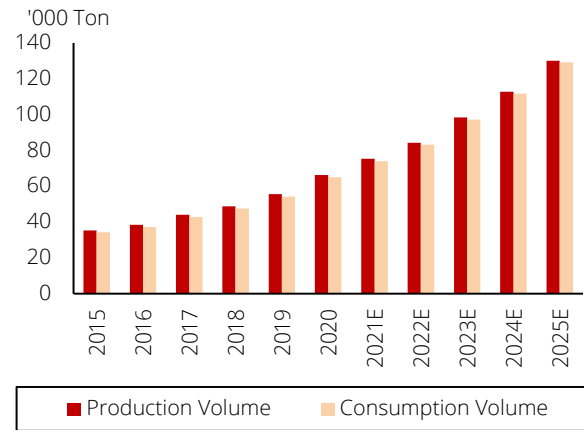
**2015-2025E Global Production and Consumption Volume of REPMS (Thousand Tons)**



Source: Frost & Sullivan Analysis, DBS HK

**New energy sectors as the major demand driver.** Looking ahead, we expect government policies to accelerate the development of low-carbon industries. Increase in energy-saving awareness and regulatory requirements are expected to stimulate new demand from sectors such as NEVs, wind turbine generators and energy-saving VFACs, and thus increase the consumption of REPMS, especially high-performance NdFeB PMs. NEVs would be the largest segment for high-performance NdFeB PMs, followed by energy saving VFACs and wind turbine generators. These three segments together accounted for about 37.6% of total consumption in 2015 and c.48.8% of consumption in 2020, and is expected to take up c.59.6% of total consumption in 2025. **From 2020 to 2025, the consumption of high-performance NdFeB PMs in NEVs, VFACs and wind turbine generators will grow at a CAGR of c.32.1% c.16.3%, c.13.1%, respectively.**

**2015-2025E Global Production and Consumption Volume of High-performance NdFeB PMs (Thousand Tons)**



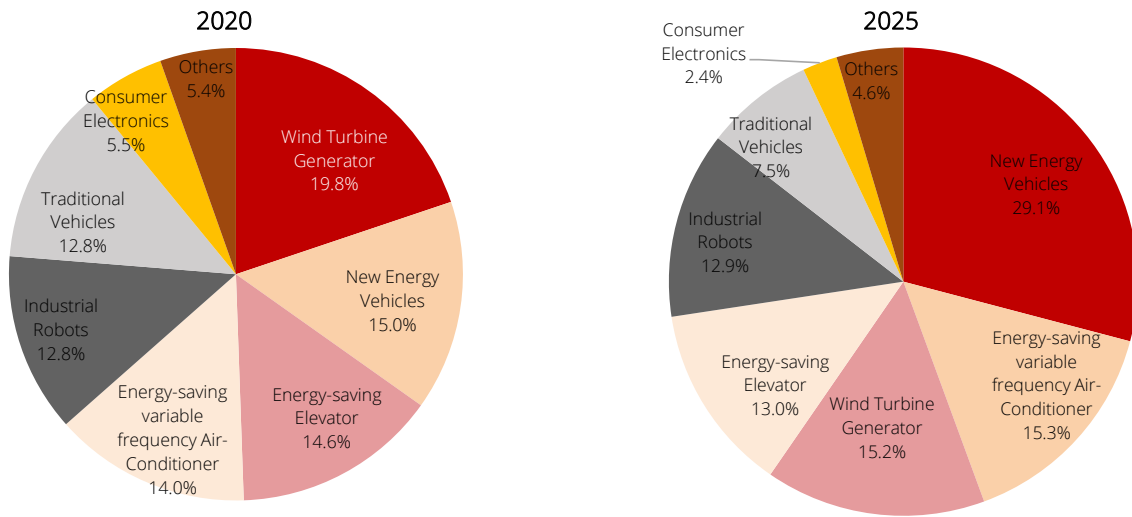
Source: Frost & Sullivan Analysis, DBS HK

**Significant price hikes due to economic recovery and higher NEV demand.** On the back of growing demand for NEVs and economic recovery post COVID-19, the demand for high-performance NdFeB PMs soared in 2021, which raised the price of rare earth materials. According to China Rare Earth Association, the price of major rare earth elements like neodymium, didymium and terbium have increased significantly. We expect the high rare earth material prices will continue thereafter backed by the imbalance between buoyant demand for REPMS from new energy sectors and the relatively strict control of rare earth supply.

**Potential huge demand from renewed industrial motors.** China issued the Motor Energy Efficiency Improvement Program (2021-2023) in 2021. According to the project, the annual output of high-efficiency energy-saving motors should reach 0.17 bn kWh, and the penetration rate of the high-efficiency energy-saving motors should be over 20% of all the operating industrial motors by 2023 (the current penetration rate is lower than 10%). The increase of high efficiency motors could save electricity consumption significantly, which is imperative to realize the Carbon Neutral Mission. Riding on the policy, the demand for REPMS, the main product of JL MAG, is expected to be boosted.

**JL Mag Rare-Earth**

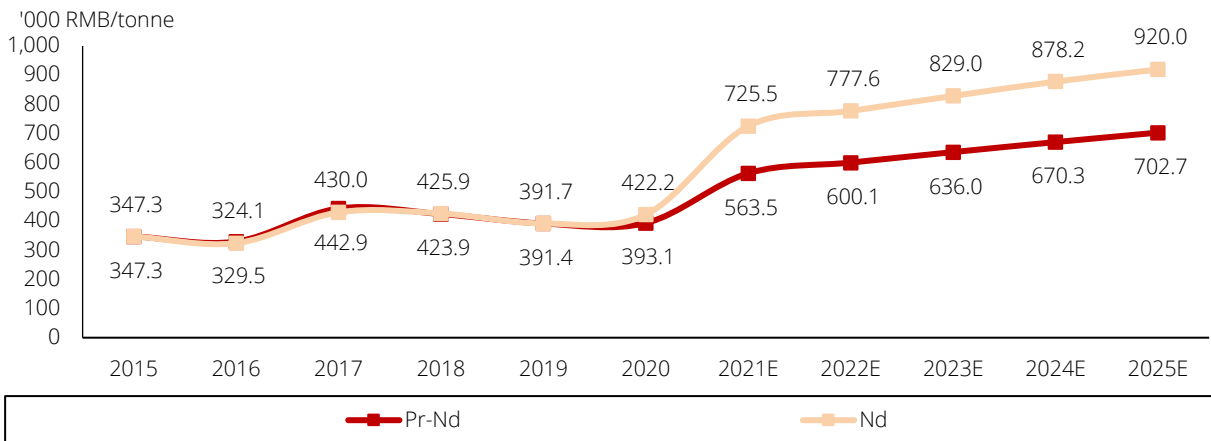
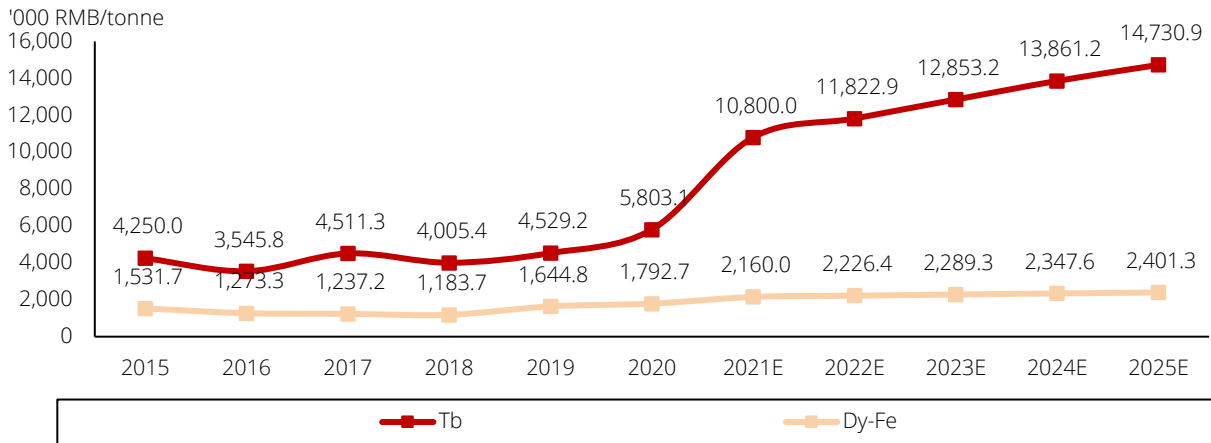
**Consumption of High-performance NdFeB PMs by Application (Global), 2020 vs 2025**



Source: Frost & Sullivan Analysis, DBS HK

**JL Mag Rare-Earth**

**Price Trend of Rare Earth Metals (China), 2015-2025E (Thousand RMB/tonne)**



Source: Frost & Sullivan Analysis, DBS HK

## JL Mag Rare-Earth

### Company Background

#### Leading global producer of high-performance REPMs.

Founded in 2008 and headquartered in Ganzhou, JL MAG dominates the REPMs market as it leverages on its GBD technology. It is ranked first in the world in terms of production of high-performance REPMs with a market share of c.14.5% and ranked first in the world's GBD REPM market with a market share of c.21.3% in 2020. Its products primarily consist of finished high-performance NdFeB PMs. The company is able to conduct mass production of high-performance NdFeB PM finished products that can achieve various performance indicators (remanence, coercive force, and maximum service temperature) using less medium and heavy rare earth ingredients.

**Expansion into various emerging fields.** The company has established partnerships with leading industry players across different fields after a strict authentication process. In 2010, 2011 and 2012, the company commenced production of high performance NdFeB PMs for wind turbines, energy saving VFACs and NEVs, respectively. In recent years, it gained a presence in new areas such as 3C

and rail transportation. The company will seek opportunities in high-end markets such as robotics and intelligent manufacturing, energy-saving elevators, and high efficiency industrial motors.

**Stable and long-term business relationships with major customers.** Most of the company's sales are conducted in the PRC (90.7% in FY21). The top 5 customers represented 56.9% of its revenue at FY21. JL MAG has established long-term sales relationships with its major customers - 3 customers remain among its top 5 customers since it was established.

**Production base located in Ganzhou, expanding to Baotou and Ningbo.** The company has been increasing its production capacity of high-performance NdFeB PM blanks at its Ganzhou production base, from 7,000 tonnes in 2018 to 15,000 tonnes in 2021, representing a CAGR of 28.9% from 2018 to 2021. Moreover, the company plans to build new facilities in Baotou and Ningbo, which will increase overall annual capacity of high-performance NdFeB REPM blanks to 40,000 tonnes in 2025.

### History of JL MAG

Year	Event
2008	The company was incorporated as a limited liability company in the PRC under the name of "Jiangxi Jinli Yongci Technology Co., Ltd." (JL MAG)
2009	JL MAG started trial production of REPM materials and the research and development of wind power products. JL MAG passed the ISO9001:2008 quality management system certification.
2010	JL MAG became a supplier for Goldwind Technology and became involved in the wind power sector. JL MAG passed the ISO14001:2004 environmental management system certification.
2011	JL MAG was awarded the title of "High-tech Enterprise" of Jiangxi Province by the Jiangxi government. JL MAG became a supplier of Shanghai Haili's energy-saving variable frequency air conditioners and was involved in the energy-saving variable frequency air conditional field.
2012	JL MAG became a supplier of Bosch, marking its entry into the automobile field.
2013	JL MAG was awarded the title of "Key High-tech Enterprise of the National Torch Program" by the Ministry of Science and Technology of the PRC.
2014	JL MAG was awarded the second prize of "Jiangxi Science and Technology Progress Award" by the Jiangxi government.
2015	JL MAG was converted into a joint stock company.  JL MAG was listed on the NEEQ.
2018	JL MAG was listed on the ChiNext Market of the Shenzhen Stock Exchange (stock code: 300748).
2019	JL MAG was selected as one of the constituents of Shenzhen Stock Exchange index and ChiNext Market index, and included in the Shenzhen-Hong Kong Stock Connect. JL MAG was selected as a constituent of FTSE Russell Index. JL MAG issued 4,350,000 Convertible Bonds and raised approximately RMB435 million.
2021	JL MAG issued 15,725,922 A Shares to specified investors and raised approximately RMB521 million.
2021	JL MAG scored A in the 2020 listed company information disclosure assessment of Shenzhen Stock Exchange.
2022	JL MAG successfully listed in HK, being the first AH dual-listed company in the REPMs industry.

Source: Company, DBS HK

## JL Mag Rare-Earth

### Top 5 customers in 2020

Customer	Background	Years of business relationship	% of total revenue	Credit Period
Customer A	A leading Chinese stated-owned rail transit and wind turbine manufacturing enterprise listed on both the SSE and HKSE	7	26.2	90 days
Customer B	A leading Chinese technology enterprise group in consumer appliances, heating Ventilation and Air Conditioning, robotics, and industrial automation systems; listed on the SZSE	5	22.2	60 days
Customer G	A leading Chinese technological industrial group in household appliances, high-end equipment and communication equipment based in Guangdong Province, China; listed on the SZSE	8	8.2	60 days
Customer F	A global leading electrification, automation and digitalization solutions provider based in Germany	3	6.2	90 days
Customer D	A leading global technology and service provider that primarily sells automotive parts, motors, electrical tools and house appliances	8	4.8	90 days
<b>Total</b>			<b>67.6</b>	

Source: Company, DBS HK

### Production Expansion Plan

Project Name	Location	Facility Status	Expected Completion	Capacity Increase
Project of Realizing an Annual Production of 3,000 Tonnes of High-performance NdFeB PMs Used in NEV and 3C Sectors	Ganzhou, Jiangxi Province, the PRC	Existing	End of 2022	High-performance NdFeB PMs: 3,000 tonnes/annum
Phase I of the Baotou Production Base	Baotou, Inner Mongolia, the PRC	New	End of 2021	High-performance NdFeB PMs blanks: 8,000 tonnes/annum
Ningbo Production Base	Ningbo, Zhejiang Province, the PRC	New	End of 2023	High-performance NdFeB PMs blanks: 3,000 tonnes/annum High-performance NdFeB PMs component parts: 100 million units(sets)/annum
Phase II of the Baotou Production Base	Baotou, Inner Mongolia, the PRC	New	2023-2024	High-performance NdFeB PMs blanks: 12,000 tonnes/annum
Project of High Efficiency Motor PMs Base	Ganzhou, Jiangxi Province, the PRC	New	2023-2024	High-performance NdFeB PMs: 2,000 tonnes/annum Surface treatment: 20,000 tonnes/annum

Source: Company, DBS HK

## JL Mag Rare-Earth

### Production Capacity

Location	Capacity At the End of 2020	Capacity At the End of 2021	Capacity At the End of 2022	Capacity At the End of 2023
Ganzhou, Jiangxi Province, the PRC	High-performance NdFeB PMs blanks: 15,000 tonnes/annum	High-performance NdFeB PMs blanks: 15,000 tonnes/annum	High-performance NdFeB PMs: 3,000 tonnes/annum High-performance NdFeB PMs blanks: 15,000 tonnes/annum	High-performance NdFeB PMs: 3,000 tonnes/annum High-performance NdFeB PMs blanks: 15,000 tonnes/annum
Baotou, Inner Mongolia, the PRC	Under Construction	High-performance NdFeB PMs blanks: 8,000 tonnes/annum	High-performance NdFeB PMs blanks: 8,000 tonnes/annum	High-performance NdFeB PMs blanks: 8,000 tonnes/annum
Ningbo, Zhejiang Province, the PRC	Under Construction	Under Construction	Under Construction	High-performance NdFeB PMs blanks: 3,000 tonnes/annum High-performance NdFeB PMs component parts: 100 million units(sets)/annum
<b>Total Capacity</b>	High-performance NdFeB PMs blanks: 15,000 tonnes/annum	High-performance NdFeB PMs blanks: 23,000 tonnes/annum	High-performance NdFeB PMs blanks: 26,000 tonnes/annum	High-performance NdFeB PMs blanks: 26,000 tonnes/annum High-performance NdFeB PMs component parts: 100 million units(sets)/annum

Source: Company, DBS HK

## JL Mag Rare-Earth

**Global REPM industry is fragmented.** The global competitive landscape of the REPM market is relatively fragmented. The top 3 companies had a total market share of 15.4% in 2020. JL MAG stands in second place in terms of production volume with a global share of 5.8% in 2020. By revenue CAGR during FY18-20, JL MAG is ranked first.

### Top 3 REPM market producers by global production volume in 2020

Ranking	Company	Market share (%)
1	Company A	5.9
2	JL MAG	5.8
3	Company C	3.7
CR3		15.4

Source: Company, Frost & Sullivan Analysis, DBS HK

### Top 3 REPM market producers by global sales revenue CAGR in 2018-2020

Ranking	Company	Revenue CAGR (%)
1	JL MAG	33.6
2	Company C	10.4
3	Company D	7.8

Source: Company, Frost & Sullivan Analysis, DBS HK

**Strong R&D to secure leading-edge technology.** In terms of production volume of high-performance REPMs, JL MAG was ranked first and accounted for 14.5% of the global market in 2020. Among all producers based on grain boundary technology, the company ranked first with market share of 21.3%.

The company holds one of the leading market shares in several specific industries. For example, it had c.20% market share in REPMs of NEV motors, had 40.3% market share in REPMs of wind turbine generators and took up 31.5% market share in VFAC motors.

### Top Three REPM Producers by Production Volume of High-performance REPMs (Global) in 2020

Ranking	Company	Market share (%)
1	JL MAG	14.5
2	Company A	8.3
3	Company D	7.7
CR3		30.5

Source: Company, Frost & Sullivan Analysis, DBS HK

**Established long-term agreements with major rare earth players to enable stable supply.** JL MAG has entered into long-term agreements with five of the six major rare earth producers in China to secure supply of rare earth materials. Ganzhou Rare Earth, which holds a controlling interest in JL's major supplier China Southern Rare Earth, the second largest rare earth supplier in China, has been one of JL MAG's shareholders since 2009.

## JL Mag Rare-Earth

### Top 5 suppliers in 2020

Supplier	Background	Major products procured	Years of relationship	% of total purchases	Credit Period
Supplier A	A company based in Sichuan engaged in rare earth smelting, and heavy rare separation and deep processing	Light rare earth and heavy rare earth	10	24.2	Within 75 days of delivery
Supplier D	A high-tech enterprise based in Inner Mongolia mainly engaged in rare earth production	Light rare earth	5	20.3	Within 30 to 60 days upon delivery
Ganzhou Rare Earth	A state-owned enterprise based in Ganzhou, Jiangxi mainly engaged in the investment and asset management in rare earth industry	Light rare earth and heavy rare earth	10	8.7	Within 60 days of delivery
Supplier F	A state-owned enterprise mainly engaged in the production and sales of metals, including rare earth metals	Light rare earth and heavy rare earth	7	5.8	Within 7 days of delivery
Supplier B	A high-tech enterprise based in Jiangxi mainly engaged in rare earth production	Light rare earth and heavy rare earth	10	5.4	Within 30 days of delivery
<b>Total</b>				<b>64.4</b>	

Source: Company, DBS HK



## JL Mag Rare-Earth

### Management & Strategy

#### Key Management Team

Name	Title	Background
Cai Baogui	Chairman, Executive Director and General Manager	Over 13 years of experience in the company. Graduated from Nanchang University with a bachelor's degree in fine chemical engineering in July 1993 and started undertaking EMBA at Tsinghua University in September 2016.
Lyu Feng	Vice Chairman, Executive Director and Deputy General Manager	Around 7 years of experience in rare earth magnet materials. Graduated from Beijing University of Aeronautics and Astronautics with a bachelor's degree in metallic materials and heat treatment in July 1991, and subsequently obtained a master's degree in business administration from Jiangxi University of Science and Technology in January 2016.
Hu Zhibin	Non-Executive Director	Nearly 25 years of experience in chemical and new energy industry. Graduated from Nanchang University with a bachelor's degree in fine chemical engineering in July 1994, and subsequently obtained a master's degree in finance from the University of International Business and Economics in June 2004.
Li Xinnong	Non-Executive Director	Nearly 25 years of experience in automobile, electric and biology industry. Obtained a master's degree in engineering from Beijing University of Aeronautics and Astronautics in March 1995.
Li Fei	Non-Executive Director	Vice President of Goldwind Technology. Graduated from Lanzhou University of Finance and Economics with a bachelor's degree in marketing in June 1997, and subsequently obtained a master's degree in business management from Huazhong University of Science and Technology in December 2002. In September 2020, he obtained a doctorate in management science and engineering from the University of Chinese Academy of Sciences.
Huang Weixiong	Non-Executive Director	Around 8 years of experience in upstream supply chain companies in the rare earth industry. Graduated from Jiangxi Normal University with a bachelor's degree in business administration in December 2016 and subsequently obtained a master's degree in business administration (economic management) from the Party School of Jiangxi Provincial Party Committee in December 2018.
You Jianxin	Independent Non-Executive Director	Professor and PhD tutor at School of Economics and Management, Tonnegji University. Graduated from Tonnegji University with a bachelor's degree in management engineering in July 1984, and subsequently obtained a master's degree and a doctorate in management science and engineering from Tonnegji University in January 1992 and December 1999, respectively.
Xu Feng	Independent Non-Executive Director	Rich experience in the operations of technology parks. Graduated from Jiujiang College in July 1995. He graduated from Tsinghua University with an EMBA degree in January 2012 and later graduated from the University of Minnesota in the United States with a doctorate in business administration in August 2020.
Yuan Taifang	Independent Non-Executive Director	Professor of accounting of Gannan Normal University. Graduated from Ganan Normal College with a bachelor's degree in mathematics in July 1990, and subsequently obtained a master's degree in business administration from Jiangxi University of Finance and Economics in January 2007. Mr. Yuan was qualified as a Certified Public Accountant in the PRC in April 1998.

Source: Company, DBS HK

**JL Mag Rare-Earth****Key Management Team (con't)**

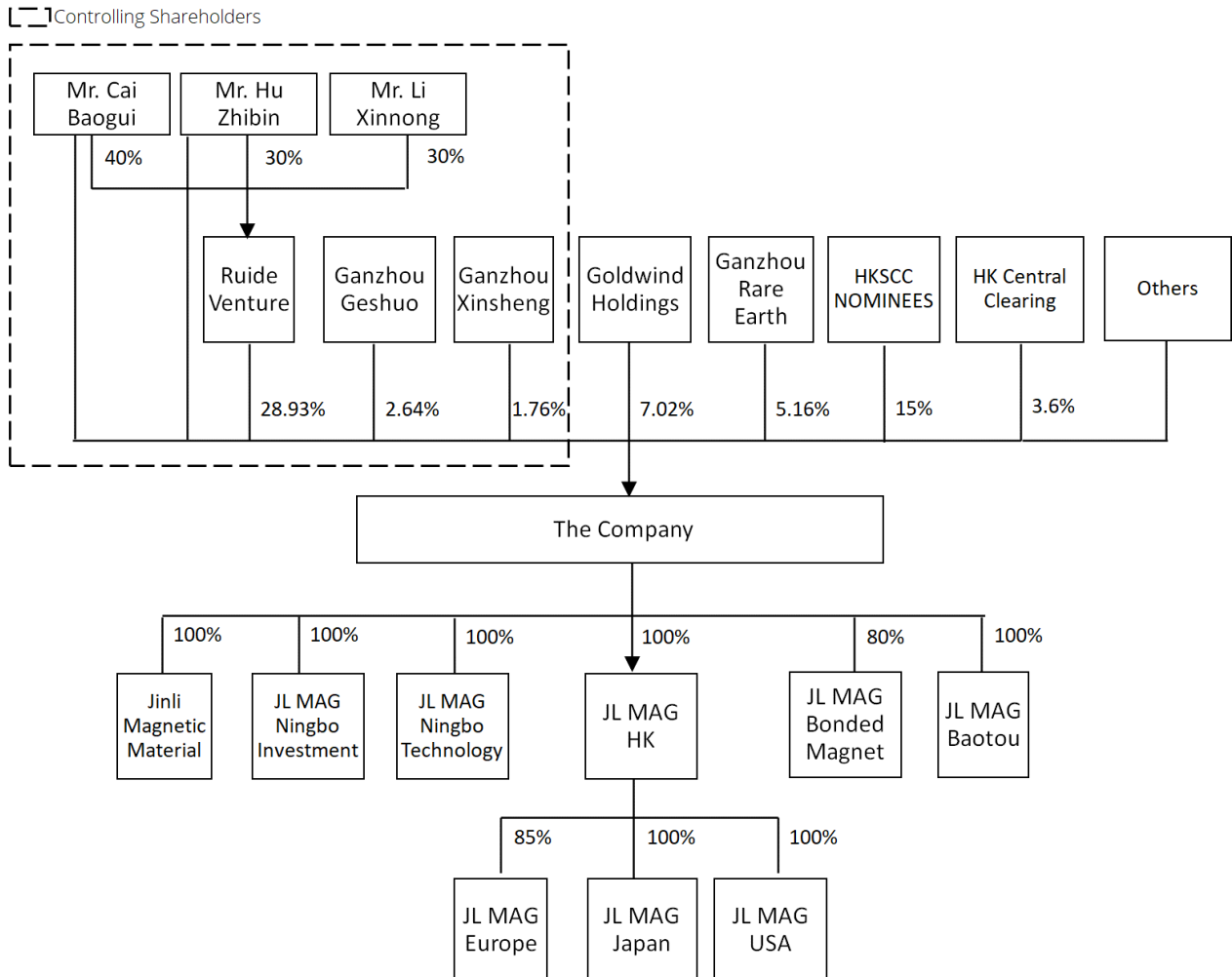
Name	Title	Background
Xie Hui	Finance Director	<ul style="list-style-type: none"><li>·Primarily responsible for the financial management of the Company.</li><li>·Graduated from Dongbei University of Finance and Economics with a bachelor's degree in CPA specialization in July 2001. Subsequently, she obtained a master's degree in business administration from Tsinghua University in July 2013, and was qualified as a Certified Public Accountant in China in 2008. She is currently a non-practicing member of The Chinese Institute of Certified Public Accountants.</li></ul>

Source: Company, DBS HK

**JL Mag Rare-Earth**

**Appendix: Shareholder structure**

**Shareholder structure by 1Q22**

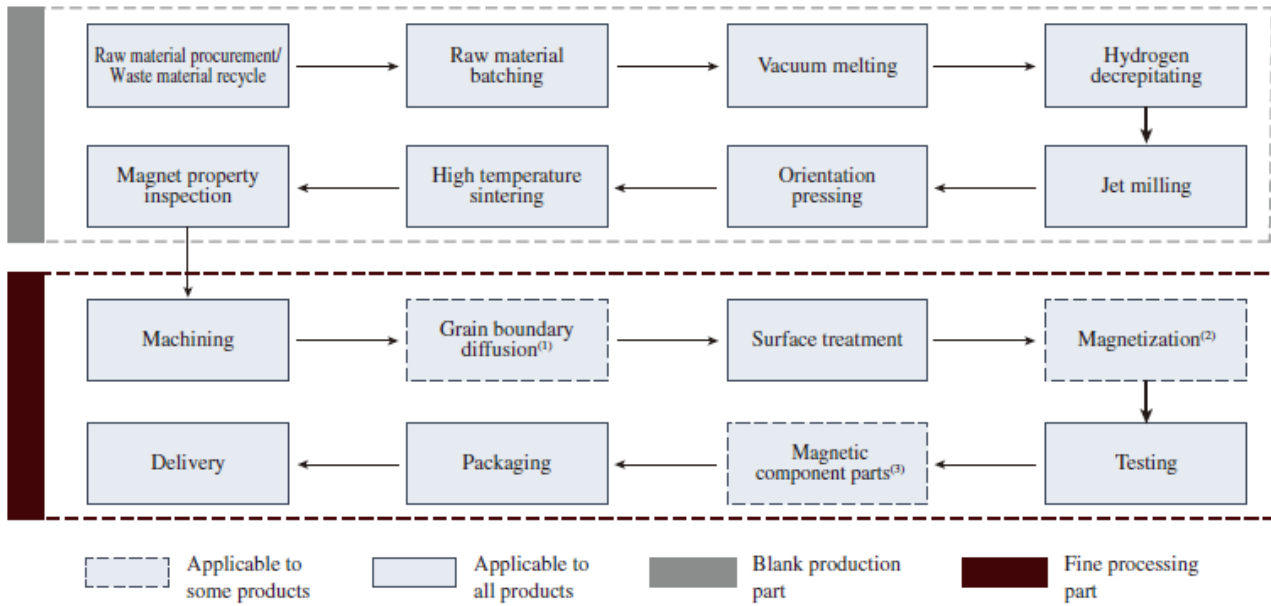


Source: Company, DBS HK

**JL Mag Rare-Earth**

**Appendix: Production workflow**

**Production Workflow**



Source: Company, DBS HK

## JL Mag Rare-Earth

### Segmental Breakdown (RMB m)

FY Dec	2019A	2020A	2021A	2022F	2023F
<b>Revenues (RMB m)</b>					
NEVs and automotive parts	220	326	1,051	2,732	3,688
PM wind turbine generators	855	879	887	976	1,005
Energy-saving VFACs	422	878	1,400	1,862	2,048
Others	133	334	742	1,336	1,737
<b>Total</b>	<b>1,630</b>	<b>2,417</b>	<b>4,080</b>	<b>6,906</b>	<b>8,478</b>

Source: Company, DBS HK

### Income Statement (RMB m)

FY Dec	2019A	2020A	2021A	2022F	2023F
Revenue	1,630	2,417	4,080	6,906	8,478
Cost of Goods Sold	(1,286)	(1,843)	(3,165)	(5,504)	(6,740)
<b>Gross Profit</b>	<b>344</b>	<b>575</b>	<b>915</b>	<b>1,402</b>	<b>1,738</b>
Other Opng (Exp)/Inc	(111)	(193)	(293)	(556)	(684)
<b>Operating Profit</b>	<b>233</b>	<b>382</b>	<b>621</b>	<b>846</b>	<b>1,054</b>
Other Non Opg (Exp)/Inc	(16)	(36)	(43)	(22)	(25)
Associates & JV Inc	(1)	(2)	(3)	(2)	(2)
Net Interest (Exp)/Inc	(38)	(65)	(63)	(58)	(65)
Dividend Income	0	0	0	0	0
Exceptional Gain/(Loss)	0	0	0	0	0
<b>Pre-tax Profit</b>	<b>179</b>	<b>279</b>	<b>512</b>	<b>764</b>	<b>961</b>
Tax	(22)	(34)	(58)	(92)	(106)
Minority Interest	0	0	(1)	(1)	(1)
Preference Dividend	0	0	0	0	0
<b>Net Profit</b>	<b>157</b>	<b>245</b>	<b>453</b>	<b>672</b>	<b>854</b>
Net Profit before Except.	157	245	453	672	854
EBITDA	259	394	643	920	1,143
<b>Growth</b>					
Revenue Gth (%)	27.2	48.3	68.8	69.3	22.8
EBITDA Gth (%)	15.8	52.1	63.2	43.0	24.2
Opg Profit Gth (%)	15.8	63.7	62.9	36.2	24.5
Net Profit Gth (%)	6.7	55.8	85.4	48.2	27.2
<b>Margins &amp; Ratio</b>					
Gross Margins (%)	21.1	23.8	22.4	20.3	20.5
Opg Profit Margin (%)	14.3	15.8	15.2	12.3	12.4
Net Profit Margin (%)	9.6	10.1	11.1	9.7	10.1
ROAE (%)	12.9	16.9	20.0	14.0	12.3
ROA (%)	6.3	7.7	9.5	8.1	7.6
ROCE (%)	9.9	13.2	14.6	11.1	10.4
Div Payout Ratio (%)	0.0	0.0	0.0	0.0	0.0
Net Interest Cover (x)	6.2	5.8	9.9	14.6	16.1

Source: Company, DBS HK

## JL Mag Rare-Earth

### Balance Sheet (RMB m)

FY Dec	2019A	2020A	2021A	2022F	2023F
Net Fixed Assets	423	563	1,038	1,150	1,274
Invts in Associates & JVs	13	11	3	9	8
Other LT Assets	123	200	448	603	769
Cash & ST Invts	819	841	1,662	4,258	4,143
Inventory	637	925	1,324	2,117	2,696
Debtors	716	815	1,269	2,147	2,615
Other Current Assets	141	179	310	358	434
<b>Total Assets</b>	<b>2,860</b>	<b>3,522</b>	<b>6,051</b>	<b>10,632</b>	<b>11,931</b>
ST Debt	468	467	1,351	1,081	1,189
Creditors	480	768	1,180	1,987	2,449
Other Current Liab	14	38	37	50	63
LT Debt	522	611	412	741	890
Other LT Liabilities	47	72	105	116	129
Shareholder's Equity	1,330	1,567	2,965	6,655	7,208
Minority Interests	0	0	1	2	3
<b>Total Cap. &amp; Liab.</b>	<b>2,860</b>	<b>3,522</b>	<b>6,051</b>	<b>10,632</b>	<b>11,931</b>
Non-Cash Wkg. Capital	1,001	1,113	1,686	2,585	3,233
Net Cash/(Debt)	(170)	(236)	(101)	2,436	2,064
Debtors Turn (avg days)	122.3	115.6	93.2	90.3	102.5
Creditors Turn (avg days)	127.6	127.0	114.8	106.9	122.2
Inventory Turn (avg days)	181.3	159.0	132.5	116.2	132.6
Asset Turnover (x)	0.7	0.8	0.9	0.8	0.8
Current Ratio (x)	2.4	2.2	1.8	2.8	2.7
Quick Ratio (x)	1.6	1.3	1.1	2.1	1.8
Net Debt/Equity (X)	0.1	0.2	0.0	(0.4)	(0.3)
Net Debt/Equity ex MI (X)	0.1	0.2	0.0	CASH	CASH
Capex to Debt (%)	13.6	23.7	37.9	18.6	18.4
Z-Score (X)	NA	NA	NA	NA	NA

Source: Company, DBS HK

### Cash Flow Statement (RMB m)

FY Dec	2019A	2020A	2021A	2022F	2023F
Pre-Tax Profit	179	279	512	764	961
Dep. & Amort.	42	50	68	97	116
Tax Paid	(22)	(34)	(58)	(92)	(106)
Assoc. & JV Inc/(loss)	(1)	(2)	(3)	(2)	(2)
(Pft)/ Loss on disposal of FAs	0	0	0	0	0
Chg in Wkg.Cap.	(272)	(184)	(731)	(1,050)	(738)
Other Operating CF	155	50	314	51	55
<b>Net Operating CF</b>	<b>81</b>	<b>158</b>	<b>102</b>	<b>(230)</b>	<b>287</b>
Capital Exp.(net)	(135)	(255)	(668)	(338)	(382)
Other Invts.(net)	0	0	0	0	0
Invts in Assoc. & JV	(2)	2	7	(5)	1
Div from Assoc & JV	0	0	0	0	0
Other Investing CF	17	45	8	0	0
<b>Net Investing CF</b>	<b>(120)</b>	<b>(208)</b>	<b>(653)</b>	<b>(344)</b>	<b>(381)</b>
Div Paid	(45)	(45)	(86)	(209)	(302)
Chg in Gross Debt	78	66	1,029	59	256
Capital Issues	111	237	648	3,225	0
Other Financing CF	142	(258)	(373)	(57)	(64)
<b>Net Financing CF</b>	<b>286</b>	<b>0</b>	<b>1,218</b>	<b>3,019</b>	<b>(110)</b>
Currency Adjustments	0	0	0	0	0
Chg in Cash	246	(50)	667	2,445	(204)
Opg CFPS (RMB)	0.85	0.82	1.17	0.98	1.23
Free CFPS (RMB)	(0.13)	(0.23)	(0.80)	(0.68)	(0.11)

Source: Company, DBS HK

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**STRONG BUY** (>20% total return over the next 3 months, with identifiable share price catalysts within this time frame)

**BUY** (>15% total return over the next 12 months for small caps, >10% for large caps)

**HOLD** (-10% to +15% total return over the next 12 months for small caps, -10% to +10% for large caps)

**FULLY VALUED** (negative total return, i.e., > -10% over the next 12 months)

**SELL** (negative total return of > -20% over the next 3 months, with identifiable share price catalysts within this time frame)

\*Share price appreciation + dividends

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## JL Mag Rare-Earth

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